

**AMENDMENT****In the Claims**

Please amend claims as follows:

1. (Currently Amended) A system of carrier transport traffic management, comprising:

a fabrication tool;

a host computer, connected to the fabrication tool, configured to acquire an available number of ~~a resource type~~ control jobs, process jobs or internal buffer sections for the fabrication tool upon detecting a loadport of the fabrication tool is available; and

a material transport system, connected to the host computer, configured to receive the available number of the ~~resource type~~ control jobs, process jobs or internal buffer sections corresponding to the fabrication tool, acquire a carrier identity corresponding to a carrier, acquire a required number of the ~~resource type~~ control jobs, process jobs or internal buffer sections corresponding to the carrier, and issue a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the ~~resource type~~ control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the ~~resource type~~ control jobs, process jobs or internal buffer sections.

2. (Currently Amended) The system of claim 1 wherein the material transport system further sends an advisory to an operator ~~or an automated dispatch system~~ if the available number of the ~~resource type~~ control jobs, process jobs or internal buffer sections is less than the required number of the ~~resource type~~ control jobs, process jobs or internal buffer sections.

3. (Original) The system of claim 1 wherein the fabrication tool provides a plurality of services compliant to a 300mm semiconductor equipment and material international (SEMI) standard.

4. (Currently Amended) The system of claim 1 wherein the carrier identity is acquired from an operator ~~or an automated dispatch system~~, and the required number of the ~~resource type corresponding to the carrier is acquired from a manufacturing execution system~~.

5. (Currently Amended) The system of claim 4 wherein the material transport system further sends an advisory to the operator ~~or the automated dispatch system~~ if the available number of the ~~resource type~~ control jobs, process jobs or internal buffer sections is less than the required number of the ~~resource type~~ control jobs, process jobs or internal buffer sections.

6 - 8. (Cancelled)

9. (Currently Amended) The system of claim 1 wherein ~~the resource type comprises a control job space, a process job space and an internal buffer space~~ the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E94 service resident in the fabrication tool.

10. (Currently Amended) The system of claim ~~9~~ 1 wherein ~~the material transport system further sends an advisory to an operator or an automated dispatch system if the available number of the resource type is less than the required number of the resource type~~ the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E40 service resident in the fabrication tool.

11. (Currently Amended) The system of claim ~~10~~ 1 wherein ~~the carrier identity is acquired from an operator or an automated dispatch system, and the required number of the resource type corresponding to the carrier is acquired from a manufacturing execution system~~ the internal buffer sections are divided into three categories, production, side dummy and fill dummy and the available number of internal buffer sections with the corresponding categories are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E87 service resident in the fabrication tool.

12. (Currently Amended) A method of carrier transport traffic management, the method comprising using a computer to perform the steps of:

receiving an available number of ~~a resource type~~ control jobs, process jobs or internal buffer sections corresponding to a fabrication tool from a host computer;

acquiring a carrier identity corresponding to a carrier;  
acquiring a required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections corresponding to the carrier identity; and  
issuing a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections.

13. (Currently Amended) The method of claim 12 further comprising a step of sending an advisory to an operator ~~or an automated dispatch system~~ if the available number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections is less than the required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections.

14. (Original) The method of claim 12 wherein the fabrication tool provides a plurality of services compliant to a 300mm semiconductor equipment and material international (SEMI) standard.

15. (Currently Amended) The method of claim 12 wherein the carrier identity is acquired from an operator ~~or an automated dispatch system~~, and the required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections is acquired from a manufacturing execution system.

16. (Currently Amended) The method of claim 15 further comprising a step of sending an advisory to the operator ~~or the automated dispatch system~~ if the available number of the ~~resource type~~ control jobs, process jobs or internal buffer sections is less than the required number of the ~~resource type~~ control jobs, process jobs or internal buffer sections.

17 - 19. (Cancelled)

20. (Currently Amended) The method of claim 12 wherein the ~~resource type~~ comprises a control job space, a process job space and an internal buffer space the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E94 service resident in the fabrication tool.

21. (Currently Amended) The method of claim ~~20~~ 12 ~~further comprising a step of sending an advisory to an operator or an automated dispatch system if the available number of the resource type is less than the required number of the resource type~~ wherein the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E40 service resident in the fabrication tool.

22. (Currently Amended) The method of claim ~~21~~ 12 wherein the ~~carrier identity is acquired from an operator or an automated dispatch system, and the required number of the resource type corresponding to the carrier is acquired from a manufacturing execution system~~ the internal buffer sections are divided into three categories, production, side dummy and fill dummy and the available number of internal buffer sections with the corresponding categories

are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E87 service resident in the fabrication tool.

23. (Currently Amended) A machine-readable storage medium for storing a computer program which when executed performs a method of carrier transport traffic management, the method comprising the steps of:

receiving an available number of ~~a resource-type~~ control jobs, process jobs or internal

buffer sections corresponding to a fabrication tool from a host computer;

acquiring a carrier identity corresponding to a carrier;

acquiring a required number of the ~~resource-type~~ control jobs, process jobs or internal

buffer sections corresponding to the carrier identity; and

issuing a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections.

24. (Currently Amended) The machine-readable storage medium of claim 23, wherein the method further comprises a step of sending an advisory to an operator ~~or an automated dispatch system~~ if the available number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections is less than the required number of the ~~resource-type~~ control jobs, process jobs or internal buffer sections.

25. (Original) The computer-readable storage medium of claim 23 wherein the fabrication tool provides a plurality of services compliant to a 300mm semiconductor equipment and material international (SEMI) standard.

26. (Currently Amended) The computer-readable storage medium of claim 23 wherein the carrier identity is acquired from an operator ~~or an automated dispatch system, and the required number of the resource type corresponding to the carrier is acquired from a manufacturing execution system.~~

27. (Currently Amended) The computer-readable storage medium of claim 26, wherein the method further comprises a step of sending an advisory to the operator ~~or the automated dispatch system~~ if the available number of the resource type control jobs, process jobs or internal buffer sections is less than the required number of the resource type control jobs, process jobs or internal buffer sections.

28 - 30. (Cancelled)

31. (Currently Amended) The computer-readable storage medium of claim 23 wherein the ~~resource type comprises a control job space, a process job space and an internal buffer space~~ the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E94 service resident in the fabrication tool.

32. (Currently Amended) The computer-readable storage medium of claim ~~31~~ 23, wherein ~~the method further comprises a step of sending an advisory to an operator or an automated dispatch system if the available number of the resource type is less than the required number of the resource type~~ the available number of control jobs are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E40 service resident in the fabrication tool.

33. (Currently Amended) The computer-readable storage medium of claim ~~32~~ 23, wherein ~~the carrier identity is acquired from an operator or an automated dispatch system, and the required number of the resource type corresponding to the carrier is acquired from a manufacturing execution system~~ the internal buffer sections are divided into three categories, production, side dummy and fill dummy and the available number of internal buffer sections with the corresponding categories are acquired by executing a 300mm semiconductor equipment and material international (SEMI) E87 service resident in the fabrication tool.